

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Fang-Hvi CHAN, et al. ) Re: Preliminary Amendment  
Serial No.: not yet assigned )  
Filed: Concurrently herewith ) Our Ref: B-4373 619285-5  
For: "LIQUID CRYSTAL DISPLAY DEVICE") Date: November 8, 2001

Commissioner of Patents and Trademarks  
BOX NEW PATENT APPLICATION  
Washington, D.C. 20231

Sir:

Prior to examination of the above-identified application, it is respectfully requested that the following amendments be made to the claims:

IN THE SPECIFICATION

Please replace the BRIEF DESCRIPTION OF THE DRAWINGS on pages 3-5 of the specification as originally filed with the amended BRIEF DESCRIPTION OF THE DRAWINGS, as set forth below. (Appendix A, which is enclosed herewith, shows how the originally filed BRIEF DESCRIPTION OF THE DRAWINGS on pages 3-5 of the specification was amended to produce the new amended BRIEF DESCRIPTION OF THE DRAWINGS).

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

The present invention can be more fully understood by reading the subsequent detailed description in conjunction with the examples and references made to the accompanying drawings, wherein:

Fig. 1 is a conventional ridge-and-fringe-field vertical alignment structure;

Fig. 2 is a conventional multi-domain vertical-aligned structure;

Fig. 3 is a perspective diagram of the LCD of the present invention;

Fig. 4A is the top view of Fig.3;

Fig. 4B is the cross-section diagram along line bb' of Fig.4A;

Fig. 4C is the cross-sectional diagram along line aa' of Fig. 4A;

Fig. 5A is the top view of the liquid crystal molecules with horizontal arrangement in the display cell of the present invention when no external voltage is applied;

Fig. 5B shows the arrangement of the liquid crystal molecules when an external voltage is applied;

Fig. 6A is the cross-sectional view of the liquid crystal molecules in a vertical arrangement in the present invention, when no external voltage is applied across the electrode pair;

Fig. 6B is a diagram of liquid crystal molecules when an external voltage is applied in Fig. 6A;

Figs. 7A to 7D are the four possible designs of the electrode pair;

Fig. 8A is the top view of the multi-electrode pairs of the present invention;

Fig. 8B is the cross-sectional diagram of Fig.8A along line aa;

Fig. 9A shows the electrode pair of the present invention located in the center of the display cell;

Fig. 9B shows the electrode pairs located at the corners of the display cell;

Figs. 10A and 10B represent the top view and the cross-sectional view of the electrode pairs parallel to each other; and

Fig. 11 shows a perspective diagram of an electrode pair in the display cell of the present invention.

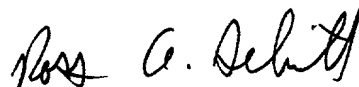
REMARKS

The above amendment to the Fig. 8A description is supported by the discussion of Fig. 8A on lines 24-26 of page 8 in the specification; and Fig. 8A of the Formal Drawings.

This Preliminary Amendment also amends the Brief Description of the Drawings to correct obvious typographical errors.

Amendment of the subject application is respectfully requested.

Respectfully submitted,



Ross A. Schmitt  
Reg. No. 42,529  
Attorney for Applicant  
LADAS & PARRY  
5670 Wilshire Boulevard #2100  
Los Angeles, California 90036  
(323) 934-2300

Enclosures:      Appendix A (2 pages)